REMARKS

Claims 1-35 and 37-38 are pending in this application. Claims 26-35, 37 and 38 are drawn to the elected invention. Claims 1-25 are directed to non-elected invention and may be cancelled by the examiner upon the allowance of the claims directed to the elected invention.

Claims 26-32, 35 and 38 were rejected under 35 USC 103 (a) as being unpatentable over WO 02/20238 to Van Tuil et al.(hereinafter also referred to as "Van Tuil") in view of WO 03/037598 to Chapman et al. (hereinafter also referred to as "Chapman"). The cited references do not render obvious claims 26-32, 35 and 38.

Van Tuil fails to suggest the present invention since, among other things, as appreciated by the examiner, Van Tuil does not teach that the mould is substantially microwave transparent and is coated with a susceptor material. Furthermore, Van Tuil does not teach the parameters of the microwave heating and the use of a plurality of magnetrons according to preferred aspects of the present invention and as recited in certain dependent claims.

In Van Tuil, reference to microwave occurs on only one single occasion in the entire 9 page reference. In particular, Van Tuil states: *"The foam mould is heated to the process temperature by continuous heating through injection of a flow of superheated steam or hot air or by continuous external heating or microwave heating of the foam mould until the internal temperature has attained the required temperature"*. However, Van Tuil refers only to the heating of the mould, not to the heating of the inner surface of the mould and more particularly material within, as required by the present invention. In fact, it seems apparent that Van Tuil was aware of microwave heating to produce expanded biodegradable foams as disclosed in WO9851466 to ATO-DLO, the assignee also of Van Tuil. Yet even with this knowledge in the art, Van Tuil did not appreciate using microwave heating in the manner required by the present invention. Furthermore, this single reference to microwave merely includes microwave as one of a number of potentially technically feasible technologies and in no way teaches one skilled in the art how to employ microwave heating in the manner according to the present invention.

Instead of actually employing microwave heating, Van Tuil reverts to using steam and a five minute cycle time to produce an expanded foam product. This tends to suggest difficulties by those skilled in the art of using microwaves when combined with pressure for low dielectric

loss materials which give off water vapor on expansion, such as biopolymers for expanded foams of complex 3D shapes. These were technical challenges also faced by the applicant.

Contrary to the results reported by Van Tuil of the processing method with a cycle time of 5 minutes, according to the present invention a cycle time of less than a1 minute can be achieved by pressurised microwave heating as demonstrated by the applicant.

Chapman does not overcome the above discuss deficiencies of Van Tuil with respect to rendering unpatentable the present invention. In particular, it would not be obvious to modify Van Tuil according to suggestions in Chapman since it would be counterintuitive to employ a mould that is substantially microwave transparent and is coated with a susceptor material when the objective is to heat the mould as alluded to by Van Tuil, but not the material inside the mould by the microwaves. Instead, persons skilled in the art would use moulds that retain the microwaves so as to be heated by them.

It is further noted that the present inventors are the same as those in Chapman et al.[1] and that Chapman was aware of Van Tuil at the time of the invention in Chapman(e.g. page 2, lines 28-30 and page 12, lines 31-34). However, Chapman did not disclose the combination of the microwave apparatus and the pressure requirements according to the present invention. This suggests that it was not obvious to persons skilled in the art to make the claimed invention. If it were obvious, it seems apparent that the present inventors would have disclosed such in their prior application, filed over 2 years before the priority application for this application.

The prior art should be considered as a whole, and portions arguing against or teaching away from the claimed invention must be considered. Please see *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.,* 230 U.S.P.Q. 46 (Fed. Cir. 1986).

Claims 33-34 were rejected under 35 USC 103 (a) as being unpatentable over WO 02/20238 to Van Tuil in view of WO 03/037598 to Chapman and US Patent 5,010,220 to Apte et al. The cited references do not render obvious claims 33-34. Apte et al. was relied upon for a disclosure of an isostatic press, which is subject to microwave energy heat and for teaching an embodiment wherein a pressure vessel comprises a chamber sealed by a lid having a microwave

[1] Maria Luisa Wake is Maria Luisa Hasting's married name.

transparent window such that microwaves are transmitted through the window. However, Apte et al. does not overcome the above discussed deficiencies of Van Tuil and Chapman with respect to rendering unpatentable the present invention. According claims 33-34 are patentable for at least those reasons as to why independent claim 26 is patentable.

Claim 37 was rejected under 35 USC 103 (a) as being unpatentable over WO 02/20238 to Van Tuil in view of WO 03/037598 to Chapman and US Patent 4,492,839 to Smith. The cited references do not render obvious claim 37. Smith was relied for a disclosure of choke seals. . However, Smith does not overcome the above discussed deficiencies of Van Tuil and Chapman with respect to rendering unpatentable the present invention. According claim 37 is patentable for at least those reasons as to why independent claim 26 is patentable.

The cited art lacks the necessary direction or incentive to those of ordinary skill in the art to render obvious the present invention. The cited art fails to provide the degree of predictability of success of achieving the results attainable by the present invention such as the much faster time needed to sustain a rejection under 35 USC 103 or on the grounds of obviousness-type double patenting. See *KSR Int'l Co. v. Teleflex, Inc*, 127 S. Ct. 1727 (2007), *Diversitech Corp. v. Century Steps, Inc.* 7 USPQ2d 1315 (Fed. Cir. 1988), *In re Mercier*, 187 USPQ 774 (CCPA 1975) and *In re Naylor*, 152 USPQ 106 (CCPA 1966).

Moreover, the results and properties of the subject matter and improvements which are inherent in the claimed subject matter and disclosed in the specification are to be considered when evaluating the question of obviousness. See *KSR Int'l Co. v. Teleflex, Inc*, 127 S. Ct. 1727 (2007), *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d. 1923 (Fed. Cir. 1990), *In re Antonie*, 195, USPQ 6 (CCPA 1977), *In re Estes*, 164 USPQ 519 (CCPA 1970), and *In re Papesch*, 137 USPQ 43 (CCPA 1963).

No result or property can be ignored in determining patentability and comparing the claimed invention to the cited art. Along these lines, see *In re Papesch*, supra, *In re Burt et al*, 148 USPQ 548 (CCPA 1966), *In re Ward*, 141 USPQ 227 (CCPA 1964), and *In re Cescon*, 177 USPQ 264 (CCPA 1973).

The present invention could only be derived from the cited art by the use of improper "hindsight", i.e. by knowing what Applicants' invention was in advance from Applicants'

disclosure, and then *ex post facto* reconstructing Applicants' invention from the prior art after a thorough search. This is impermissible.. See *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) and *Grain Processing Corp. v. American Maize-Products Corp.*, 5 U.S.P.Q.2d 1788 (Fed. Cir. 1988).

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Office Action. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

Please charge any fee due with this paper to our Deposit Account No. 22-0185, under Order No. 27606-00001-US1 from which the undersigned is authorized to draw.

Dated: April 28, 2010

Respectfully submitted,

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